



Educational Topic

Chemical Engineer

Related Job Titles:

Organic chemist, polymer chemist, thermodynamicist, fluid dynamicist, materials engineer

Job Description:

Chemical engineers use chemistry, engineering and physics to develop chemical products such as propulsion gases. When designing a new product, engineers first figure out what it needs to do. They then design and test the product. They also write reports on the product. Most engineers work in office buildings or laboratories. Some must travel to different work sites.

Interests / Abilities:

- Are you good at math?
- Are you creative?
- Is your work detailed?
- Do you like to solve problems?
- Are you interested in how things work?
- Do you like working with computers?
- Are you good at working with a team?

Suggested School Subjects / Courses:

- Mathematics (algebra, geometry, trigonometry, pre-calculus, calculus)
- Science (physics, biology, chemistry)
- Engineering (thermodynamics, fluid mechanics)
- Computer programming
- Social studies (history)
- English (writing)

Education / Training Needed:

The minimum education required for this position is a bachelor's degree in chemical engineering or a related subject from an accredited college or university. To do research, a Ph.D. is highly desired for this position.

Areas of expertise:

- *Manufacturing:* design and update machines such as airplanes, robots, cars, etc.
- *Fluids:* design and build fluid flow systems or processes such as pipes
- *Biomedical:* design and develop instruments, such as a heart pump, for medical use
- *Systems:* design and analyze mechanical or heating systems

